

## Contributors to this Issue

REUBEN E. ALLEY, JR., B.A., University of Richmond, 1938; E.E., Princeton University, 1940; Ph.D., Princeton University, 1949. Massachusetts Institute of Technology, Radiation Laboratory, 1942 and 1943; University of Richmond, 1948-51; Bell Telephone Laboratories, 1952-53. While at Bell Laboratories, Mr. Alley was engaged in investigations of the magnetic properties of ferrites, with particular interest in frequencies above 20 megacycles. He recently accepted an appointment at the University of Richmond as an associate professor of physics. Member of the American Physical Society, A.I.E.E., I.R.E., Phi Beta Kappa and Sigma Xi.

M. M. ATALLA, B.S., Cairo University, 1945; M.S., Purdue University, 1947; Purdue University, Ph.D., 1949; Studies at Purdue undertaken as the result of a scholarship from Cairo University for four years of graduate work. Bell Telephone Laboratories, 1950-. For the past three years he has been a member of the Switching Apparatus Development Department, in which he is supervising a group doing fundamental research work on contact physics and engineering. Current projects include fundamental studies of gas discharge phenomena between contacts, their mechanisms, and their physical effects on contact behavior; also fundamental studies of contact opens and resistance. In 1950, an article by him was awarded first prize in the junior member category of the A.S.M.E. He is a member of Sigma Xi, Sigma Pi Sigma, and Pi Tau Sigma, and a junior member of the A.S.M.E.

WILLIAM R. BENNETT, B.S. in E.E., Oregon State College, 1925; M.A., Columbia University, 1928; Ph.D., Columbia, 1949. Bell Telephone Laboratories, 1925-. His early Laboratories projects included work on wire transmission problems, particularly the development of terminal apparatus in the voice and telegraph range, the design of circuits for television, and submarine cable telephony. Concerned with the coaxial cable in 1935, he spent several years working on the requirements and measuring techniques applicable to the load rating of multi-channel repeaters. His work during World War II was directed to a

number of military projects. Since then he has concentrated on pulse code modulation and general transmission problems. Member of the A.I.E.E., I.R.E., The American Physical Society, Tau Beta Pi, Eta Kappa Nu and Sigma Xi.

A. N. GRAY, Bell Telephone Laboratories, 1922-1929; Western Electric Company, 1930-. Mr. Gray, Assistant Superintendent, Development Engineering, Point Breeze since 1946, is engaged in the development of new equipment and processes. He was Manufacturing Engineer, Rubber Covered Wire, throughout the period of World War II when the Western was heavily loaded with the manufacture of communications items for the Armed Services. He is a member of the A.S.T.M., being Western's representative from Point Breeze, and is assigned to Committee D-11 on Rubber and Rubber Products.

L. N. HAMPTON, Cooper Institute of Technology; Experimental Department, Otis Elevator Company, Engineering Department; Western Electric Company and Bell Telephone Laboratories, 1917-. In the Western Electric Company's Apparatus Development Department, he designed Signal Corps apparatus for the detection of airplanes and submarines. Later, in Switching Apparatus Development, he was in charge of the development of apparatus for use in the telephone plant. After World War II and work on airborne radar and computing systems for military projects, he was engaged in the development of train-dispatching apparatus, cameras for photographing subscribers' message registers and the cam switching panels of the overseas radio privacy systems. He also was responsible for the development of the trouble recorder used in the 4 and 5 crossbar systems and the apparatus aspects of the card translator. More recently he has been active in the development of components for guided missiles. Member of the A.S.M.E. and the General Society of Mechanics and Tradesmen of New York; secretary, Foundation for Homeopathic Research.

H. R. HUNTLEY, B.S. in E.E., University of Wisconsin, 1921. Wisconsin Telephone Co. 1917-1930, except for a leave of absence to complete education begun earlier at Leland Stanford University and continued at the University of Wisconsin. Leaving The Wisconsin Telephone Company where he was Transmission Engineer, Mr. Huntley came to the Foreign Wire Relations Section of the Operating and Engineering Department of American Telephone and Telegraph Company in 1930. In 1942 he transferred to the Transmission Section and has been Transmission Engineer since 1951.

LUTHER W. HUSSEY, A.B., Dartmouth College, 1923; M.A., Harvard University, 1924. Union College, Instructor, 1924-30; Bell Telephone Laboratories, 1930-. Mr. Hussey was first engaged in research on non-linear resistive and reactive devices such as copper-oxide and germanium diodes. He worked on the development of a non-linear coil for the magnetic pulse generator and the harmonic generator in the megacycle range. He has been concerned with the development of modulating devices, negative impedance circuits, and switching and computer devices, and is currently associated with an electronic apparatus development group working on transistors and transistor circuits. He is a member of the I.R.E.

ROBERT L. KAYLOR, B.S. in E.E., University of Michigan, College of Engineering, 1927. Detroit Edison Company, 1922-27; American Telephone and Telegraph Company, Development and Research Department, 1927-34; Bell Telephone Laboratories, 1934-. At A. T. and T. he was engaged in field testing of new telephone apparatus and fundamental studies of noise and cross-induction in telephone circuits. He continued these and related studies after transferring to the Laboratories, his work including fundamental studies of methods of measuring radio noise. During World War II he was Signal Officer with several Army and Air Corps organizations, and is now a Lieutenant Colonel in the Air Force Reserve. Mr. Kaylor returned to the Laboratories in 1945 to do field trials of radio relay systems, and analysis and measurement studies in the 4,000-mc range. More recently he has been engaged in classified military projects. Member of the A.I.E.E., Associate of the I.R.E.

G. E. MURRAY, Western Electric Company, 1936-. Mr. Murray has been active in the development of equipment and processes for the electroforming project and is in charge of the electrochemical development group. During World War II, he was engaged in the manufacture of rubber covered wire and communications items for the Armed Services. He is a member of the American Chemical Society.

JAMES B. NEWSOM, Western Electric Company and Bell Telephone Laboratories, 1920-. After four years of military service in World War I, he joined Western Electric, directing his attention to the development of manual telephone systems and the panel telephone system. Since the incorporation of the Laboratories in 1925, he has been a member of what is now Switching Systems Development II and has devoted time

to the design of panel and crossbar systems, crossbar tandem and toll crossbar systems. During World War II he was a Lieutenant Commander in the U. S. Navy, assigned to the Naval Research Laboratory in Washington, D. C. Since 1946, Mr. Newsom has been in charge of a group concerned with the development of toll crossbar senders, decoders, translators and markers.

F. W. STUBNER, B.S., Cooper Union, 1930. Bell Telephone Laboratories, 1929-. Mr. Stubner joined the Laboratories' research drafting department and became a design engineer concerned with the design and building of apparatus and testing equipment for telephone instruments and submarine cable. Transferring to the Electronic Apparatus Development Department in 1940, he worked on the design of vacuum tubes, magnetic switches, and glasswork for the carbon deposited resistor. Since 1944 he has been associated with the applied mechanics laboratory, responsible for strength tests on vacuum tubes, shock and vibration studies, and associated design assignments. He transferred to Allentown, Pa., in 1948. Member of the Engineers Club of the Lehigh Valley and the Society for Experimental Stress Analysis.

A. S. WINDELER, B.S., Rutgers University, 1930; Bell Telephone Laboratories, 1930-. Mr. Windeler has been engaged in the design and development of toll cable, including coaxial, video pair, and microwave, types. He is currently in charge of a group concerned with the development of expanded polyethylene insulated conductors for multipair cable.